

WHAT IS CLAIMED IS:

- 545 A' 7
1. An information processing apparatus connected to a network, comprising:
- communicating means for communicating information with each of terminal devices on said network;
- first acquiring means for acquiring information related to the terminal device connected to said network;
- second acquiring means for acquiring information related to a peripheral device which is locally connected to the terminal device whose information is acquired by said first acquiring means;
- third acquiring means for acquiring a status of the peripheral device whose information is acquired by said second acquiring means; and
- display means for displaying information of a terminal device connected to said network, information of a peripheral device connected to said terminal device, and a status thereof based upon the information acquired by said first acquiring means, the information acquired by said second acquiring means, and the status acquired by said third acquiring means.
2. An information processing apparatus according to claim 1 wherein:
- said first acquiring means, said second acquiring means, and said third acquiring means poll the terminal

Sub A'7 dev

device on said network to acquire both the information and the status thereof every time a predetermined time period has passed; and

5 said display means updates the display content
 based upon said polling-acquired information and
 condition.

3. An information processing apparatus according to claim 1 wherein:

10 said first acquiring means, said second acquiring
means, and said third acquiring means poll the terminal
device on said network to acquire both the information
and the status thereof in response to a predetermined
operation made by a user; and

15 said display means updates the display content
based upon said polling-acquired information and
condition.

4. An information processing apparatus according
20 to claim 1 wherein:

said first acquiring means, said second acquiring means, and said third acquiring means receive and obtain both the information and the condition notified from the terminal device on said network; and

25 said display means updates the display content
based upon said notified information and condition.

Sub A' 7

5. An information processing apparatus according to claim 1, further comprising:

selecting means for selecting a desirable peripheral device by a user from the peripheral devices displayed by said display means; and wherein:

a step-up operation for using the selected peripheral device is carried out in response to the selecting operation by the user via said selecting means.

6. An information processing apparatus according to claim 1 wherein:

said peripheral device is a printer device.

7. An information processing apparatus according to claim 1 wherein:

said peripheral device is a modem device.

8. An information processing apparatus according to claim 1 wherein:

said peripheral device is an image input device.

9. An information processing apparatus according to claim 1 wherein:

said first acquiring means acquires information of a terminal device within a predetermined network domain.

10. An information processing apparatus according

Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

5

10

15

20

25

25

said icon group contains an icon for indicating that a peripheral device is busy, and also another icon for representing that a peripheral device is not under

[illegible]

15. An information processing apparatus according
10 to claim 12 wherein:

15 16. An information processing apparatus according
to claim 12 wherein:

20

17. An information processing apparatus connected to a network, comprising:

25 connecting means for locally connecting a
 peripheral device thereto;

second saving means for saving information of said

Sub A'7

peripheral device connected by said connecting means;

detecting means for detecting a condition of said
peripheral device connected by said connecting means;

and transmitting means for transmitting the

5 information saved in said first saving means, the
information saved in said second saving means, and the
condition detected by said detecting means to another
device in response to a request issued from said
another device.

10

18. An information processing apparatus connected
to a network, comprising:

first saving means for saving information of the
own device on said network;

15 connecting means for locally connecting a
peripheral device thereto;

second saving means for saving information of said
peripheral device connected by said connecting means;

20 detecting means for detecting a condition of said
peripheral device connected by said connecting means;
and transmitting means for transmitting the
information saved in said first saving means, the
information saved in said second saving means, and the
condition detected by said detecting means to another
25 device on said network in a periodic manner.

19. A system in which at least a first

information processing apparatus and a second information processing apparatus are connected to a network, wherein:

5 said first information processing apparatus is comprised of:

 first acquiring means for acquiring information related to the first information processing apparatus connected to said network;

10 second acquiring means for acquiring information related to a peripheral device which is locally connected to the first information processing apparatus whose information is acquired by said first acquiring means;

15 third acquiring means for acquiring a status of the peripheral device whose information is acquired by said second acquiring means; and

20 display means for displaying information of the first information processing apparatus connected to said network, information of a peripheral device connected to said first information processing apparatus, and a status thereof based upon the information acquired by said first acquiring means, the information acquired by said second acquiring means, and the status acquired by said third acquiring means;

25 and wherein:

 said second information processing apparatus is comprised of:

first saving means for saving information of the
own device on said network;

connecting means for connecting a peripheral
device thereto;

5 second saving means for saving information of said
peripheral device connected by said connecting means;

detecting means for detecting a condition of said
peripheral device connected by said connecting means;

and transmitting means for transmitting the
10 information saved in said first saving means, the
information saved in said second saving means, and the
condition detected by said detecting means to said
first information processing apparatus.

15 20. A system according to claim 19 wherein:

said first acquiring means, said second acquiring
means, and said third acquiring means poll the first
and second information processing apparatuses on said
network to acquire both the information and the status
20 thereof every time a predetermined time period has
passed; and

said display means updates the display content
based upon said polling-acquired information and
condition.

25

21. A system according to claim 19 wherein:

said first acquiring means, said second acquiring

means, and said third acquiring means poll the first
and second information processing apparatuses on said
network to acquire both the information and the status
thereof in response to a predetermined operation made
5 by a user; and said display means updates the
display content based upon said polling-acquired
information and condition.

22. A system according to claim 19 wherein:
10 said first acquiring means, said second acquiring
means, and said third acquiring means receive and
obtain both the information and the status notified
from the first and second information processing
apparatuses on said network; and
15 said display means updates the display content
based upon said notified information and condition.

23. A system according to claim 19, further
comprising:
20 selecting means for selecting a desirable
peripheral device by a user from the peripheral devices
displayed by said display means; and wherein:
a step-up operation for using the selected
peripheral device is carried out in response to the
25 selecting operation by the user via said selecting
means.

24. A system according to claim 19 wherein:
said peripheral device is a printer device.

25. A system according to claim 19 wherein:
said peripheral device is a modem device.

26. A system according to claim 19 wherein:
said peripheral device is an image input device.

27. A system according to claim 19 wherein:
both said first information processing apparatus
and said second information processing apparatus belong
to a predetermined network domain; and
said first acquiring means acquires information of
the first and second information processing apparatuses
within a predetermined network domain.

28. A system according to claim 20 wherein:
said display means displays the first/second
information processing apparatuses and the peripheral
device, which are displayed, by way of display
elements; and also displays a connection condition
thereof by connecting the respective display elements
to each other on a display screen thereof.

29. A system according to claim 28 wherein:
said display means displays thereon the connection

condition of said peripheral device based upon a sort of lines used to connect the terminal device with said peripheral device.

5 30. A system according to claim 28 wherein:
when said display means displays the condition of the peripheral device, said display means selects an icon corresponding to said condition of the peripheral device from a predetermined icon group to display said
10 selected icon.

31. A system according to claim 30 wherein:
said icon group contains an icon for representing the condition of the peripheral device by way of a
15 moving picture representation.

32. A system according to claim 30 wherein:
said icon group contains an icon for representing the condition of the peripheral device by way of a mesh
20 thereof.

33. A system according to claim 30 wherein:
said icon group contains an icon for indicating that a peripheral device is busy, and also another icon
25 for representing that a peripheral device is not busy.

34. A system according to claim 30 wherein:
said icon group contains an icon for indicating
that a driver program for controlling a peripheral
device is not installed in the own device.

5

35. A system according to claim 30 wherein:
said peripheral device is a printer device; and
said icon group contains such an icon which
indicates that a plurality of print jobs are pending.

10

Sub A 7

36. A method for displaying information of a
peripheral device locally connected to a terminal
device connected to a network, comprising the steps of:

15

acquiring first information related to the
terminal device connected to said network;
acquiring second information related to the
peripheral device that is locally connected to the
terminal device whose first information is acquired;

20

acquiring third information related to the
condition of the peripheral device whose second
information is acquired; and

25

displaying a connection status display indicative
of information of the terminal device connected to said
network, information of the peripheral device connected
to said terminal device, and the status thereof based
upon the first information, the second information, and
the third information.

Sub A7

37. A display method according to claim 36
wherein:

5 said first information, said second information,
and said third information are acquired by polling the
terminal device on said network to acquire both the
information and the status thereof every time a
predetermined time period has passed; and

10 the content of said connection status display is
updated by the display content based upon said polling-
acquired information and condition.

38. A display method according to claim 36
wherein:

15 said first information, said second information,
and said third information are acquired by polling the
terminal device on said network to acquire both the
information and the status thereof in response to a
predetermined operation made by a user; and the display
content of said connection status display is updated by
20 the display content based upon said polling-acquired
information and condition.

39. A display method according to claim 36,
further comprising the steps of:
25 receiving and obtaining said first information,
said second information, and said third information
notified from the terminal device on said network; and

[illegible]

5

10

15

20

25

43. A display method according to claim 36
wherein:

44. A display method according to claim 36

said first information is acquired from a terminal device within a predetermined network domain.

5 wherein:

10 connecting the respective display elements to each
 other on a display screen thereof.

wherein:

15 the connection status of said peripheral device is
displayed based upon a sort of lines used to connect
the terminal device with the peripheral device.

20 wherein:

25 the connection status display.

48. A display method according to claim 47

said icon group contains an icon for representing the condition of the peripheral device by way of a moving picture representation.

49. A display method according to claim 47
wherein:

10

50. A display method according to claim 47
wherein:

15

51. A display method according to claim 47
20 wherein:

20

25

[illegible]

acquiring second information relating to the peripheral device which is locally connected to the terminal device whose first information is acquired;

displaying a connection status display indicative of information of the terminal device connected to said network, information of the peripheral device connected to said terminal device, and a status thereof based upon the first information, the second information, and the third information in the first information processing apparatus; and also comprising the steps of:

saving information relating to said peripheral
device locally connected thereto;

transmitting the information related to said own
device, the information related to said peripheral

Sub A'7

device, and the condition of said peripheral device to said first information processing apparatus in a second information processing apparatus.

5 55. A display method according to claim 54 wherein;

 said first information, said second information, and said third information are acquired by polling the information processing apparatuses on said network to
10 acquire both the information and the status thereof every time a predetermined time period has passed; and

 the content of said connection status display is updated by the display content based upon said polling-acquired information and condition.

15 56. A display method according to claim 54 wherein;

 said first information, said second information, and said third information are acquired by polling the information processing apparatuses on said network to
20 acquire both the information and the status thereof in response to a predetermined operation made by a user; and the display content of said connection status display is updated by the display content based upon
25 said polling-acquired information and condition.

57. A display method according to claim 54

[illegible]

5

10

15

20

25

25

25

25

said peripheral device is a modem device.

Sub A' 7

comprising the steps of:

saving first information relating to the own
device on said network;

5 saving second information relating to said
peripheral device locally connected thereto;

detecting a condition of said peripheral device
connected thereto; and

10 transmitting the first information, the second
information, and the condition of said peripheral
device to another device based upon a request issued
from another device on said network.

53. A method for displaying information of a
peripheral device locally connected to an information
15 processing apparatus connected with a network,
comprising the steps of:

saving first information relating to the own
device on said network;

20 saving second information relating to said
peripheral device locally connected thereto;

detecting a condition of said peripheral device
connected thereto; and

25 transmitting the first information, the second
information, and the condition of said device to
another device on said network in a periodic manner.

54. A method for displaying information of a

2025 RELEASE UNDER E.O. 14176

Sub A'7

61. A display method according to claim 54
wherein:
said peripheral device is an image input device.

5 62. A display method according to claim 54
wherein:
both said first information processing apparatus
and said second information processing apparatus belong
to a predetermined network domain; and

10 said first information processing apparatus
acquires said first information from an information
processing apparatus within said predetermined network
domain.

15 63. A display method according to claim 54
wherein:
to display the connection status display, the
information processing apparatuses and a peripheral
device, which are displayed, are represented by way of
20 display elements; and also the connection status is
displayed by connecting the respective display elements
to each other on a display screen thereof.

25 64. A display method according to claim 54
wherein:
the connection status of said peripheral device is
displayed based upon a sort of lines used to connect

Sub A7 the terminal device with the peripheral device.

65. A display method according to claim 54
wherein:

5 when the condition of the peripheral device is
displayed, an icon corresponding to said condition of
the peripheral device is selected from a predetermined
icon group to display said selected icon, to display
the connection status display.

10 66. A display method according to claim 65
wherein:

15 said icon group contains an icon for representing
the condition of the peripheral device by way of a
moving picture representation.

67. A display method according to claim 65
wherein:

20 said icon group contains an icon for representing
the condition of the peripheral device by way of a mesh
thereof.

68. A display method according to claim 65
wherein:

25 said icon group contains an icon for indicating
that a peripheral device is busy, and also another icon
for representing that a peripheral device is not busy.

[illegible]

10

15

20

25

a process operation for acquiring second information related to a peripheral device which is locally connected to the terminal device whose first information is acquired;

a process operation for acquiring third information related to a status of the peripheral device whose second information is acquired; and

Sub A'7

a process operation for displaying a connection status display indicative of information of said terminal device connected to said network, information of the peripheral device connected to said terminal device, and a status thereof based upon the first information, the second information, and the third information.

72. A storage medium according to claim 71 wherein:

said first information, said second information, and said third information are acquired by polling the terminal device on said network to acquire both the information and the status thereof every time a predetermined time period has passed; and

the content of said connection status display is updated by the display content based upon said polling-acquired information and condition.

73. A storage medium according to claim 71 wherein:

said first information, said second information, and said third information are acquired by polling the terminal device on said network to acquire both the information and the status thereof in response to a predetermined operation made by a user; and the display content of said connection status display is updated by

[illegible]

5

10

15

20

25

said peripheral device is a printer device.

said peripheral device is a modem device.

wherein:

said peripheral device is an image input device.

10 wherein:

said first information processing apparatus
acquires information of a terminal device within a
predetermined network domain.

wherein:

as to said connection status display, a terminal device and a peripheral device, which are displayed, are represented by way of display elements; and also a connection condition thereof is displayed by connecting the respective display elements to each other on a display screen thereof.

25 wherein:

the connection condition of said peripheral device
are displayed by way of a sort of lines used to connect

[illegible]

5 as to said connection status display, when the condition of the peripheral device is displayed, an icon corresponding to said condition of the peripheral device is selected from a predetermined icon group to display said selected icon.

15 said icon group contains an icon for representing
the condition of the peripheral device by way of a
moving picture representation.

20 said icon group contains an icon for representing
the condition of the peripheral device by way of a mesh
thereof.

25 said icon group contains an icon for indicating
that a peripheral device is busy, and also another icon
for representing that a peripheral device is not busy.

Sub A17

86. A storage medium according to claim 82
wherein:

5 said icon group contains an icon for indicating
that a driver program for controlling a peripheral
device is not installed in the own device.

87. A storage medium for storing thereinto a
computer program executed by a computer employed in an
information processing apparatus connected to a
10 network, wherein:

said computer program is comprised of:

a process operation for saving first information
relating to the own device on said network;

15 a process operation for saving second information
relating to said peripheral device locally connected
thereto;

a process operation for detecting a condition of
said peripheral device connected thereto; and

20 a process operation for transmitting the first
information, the second information, and the detected
condition to another device based upon a request issued
from said another device on said network.

88. A storage medium for storing thereinto a
25 computer program executed by a computer employed in an
information processing apparatus connected to a
network, wherein:

sub A'7

said computer program is comprised of:

a process operation for saving first information relating to the own device on said network;

5 a process operation for saving second information relating to said peripheral device locally connected thereto;

a process operation for detecting a condition of said peripheral device connected thereto; and

10 a process operation for transmitting the first information, the second information, and the detected condition to another device on said network in a periodic manner.

2025 RELEASE UNDER E.O. 14176